

The task for an internet service provider (ISP) is to rapidly deliver all requested content to the user at the lowest overall cost per user.

An ISP should not systematically deliver some content to some users and refuse to deliver other content to some users. This is either poor delivery of content or censorship - depending on the systematic process to refuse some content delivery. Several investigators have found that Comcast systematically interrupts the delivery of some content to some users. Comcast accomplishes the interruption by sending a perfectly forged TCP packet (correct peer, port, and sequence numbering) with the RST (reset) flag set. This packet is obeyed by the Comcast network stack or operating system, which drops the connection to the user - voiding any content delivery to the user. For example, in BitTorrent connections, the RST message is sent well after the handshake, and often after some data has been exchanged. The systematic filter used by Comcast interferes with BitTorrent during lulls (NOOP and HAVE commands) as well as the moment of transition from the ending of sending one complete piece. Users have found that when they are not using Comcast, BitTorrent disconnections due to peer resets (RST flag) are 3%. When using Comcast, 39% of connections are terminated by Comcast using the RST flag. BitTorrent is used by corporations to download and update software, and it will be used soon by movie companies to legally download digital movies to users. Comcast systematically interferes with these interstate commerce activities.

The FCC should find: 1. Comcast is in violation of "good practice of network management", and 2. is conducting activities that interfere with interstate commerce. The FCC should thus fine Comcast heavily to: 1. ensure that Comcast does not repeat this offensive behavior, and 2. convey a strong message to other ISPs that this offensive behavior will not be allowed by anyone else. Further, the FCC should require that Comcast, and any other ISP, state in their customer contracts the methods used to "shape network traffic in the conduct of network management". Specific procedures and the exact software used may be proprietary, and hence not be disclosed, but the specific results of "traffic shaping" should be stated in contracts, along with the conditions or triggers for their use. Customers should be informed about "traffic shaping" and should be able to choose among competing ISPs based on a clear understanding of the network reliability and speed that they can expect from competing vendors of internet service. The FCC should foster this competition.

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"In comedy, there is no credit for creativity. When you've got the whole government working for you, just report the facts. There's no need to exaggerate anything." - Will Rogers

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